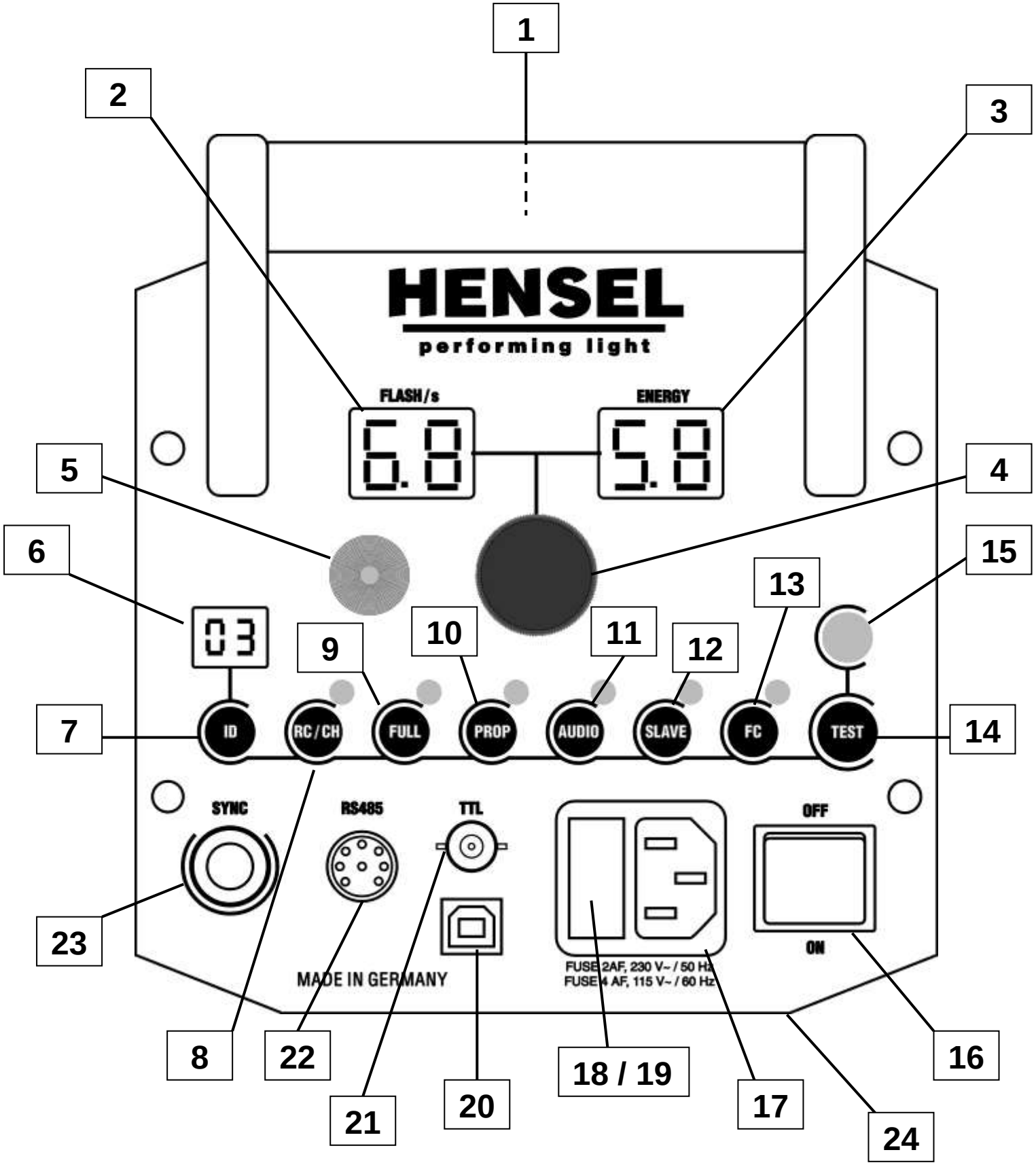
// Speed Max

Compact flash

USER MANUAL //
ENGLISH

WWW.HENSEL.DE

HENSEL
performing light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HENSEL
performing light
FLASH/s
6.8
ENERGY
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13
03
9
10
11
12
7
ID
RC/CH
FULL
PROP
AUDIO
SLAVE
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14
SYNC
RS485
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OFF
23
MADE IN GERMANY
FUSE 2AF, 230 V~ / 50 Hz
FUSE 4 AF, 115 V~ / 60 Hz
ON
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18 / 19
16
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1 Introduction

Thank you for purchasing this Speed Max flash unit. You now own one of the fastest compact flash units of the world.

The engineers at HENSEL have put all their long-time experience of manufacturing first class flash equipment and their expert know how into the making of the Speed Max, in order to provide photographers with this excellent tool for innovative and creative professional work.

Of course we built this high class flash unit adhering to the very strict HENSEL Safety and Quality Standards. Constant monitoring during production and consistent quality checks ensure that these standards are met.

This high tech product you have purchased is build to last, and it will stand up to continuous use for a long time. However, you should be informed about certain operating procedures, and on the care and proper use in order to insure maximum performance and service, to prolong the life of the equipment, to prevent damages, and not to void any part of the warranty.

Please add your share and treat your new Speed Max flash unit with reasonable understanding and the necessary care, and it will prove to be a valuable and dependable tool.

If you have questions about the use of this equipment, please feel free to contact us.

We wish you much success and „good light" at all times.

HENSEL -VISIT International GmbH

User manual – Date of Revision: 2011-01

Technical data in this manual may be subject to change without prior notice. There is no guarantee for the absence of errors. Values listed are approximate values attained with 230V/50Hz mains supply, and should not be understood as binding in a legal sense. The values mentioned can differ on actual production units due to tolerances in components used, and to technical changes or modifications carried out.

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3 General safety rules and information

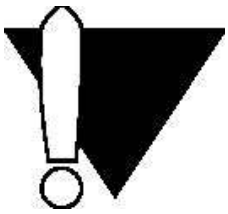
Compact flash systems store electrical energy in capacitors that are charged to high voltage potentials. Because there is a significant risk of electric shock in handling flash units in general, safe working practices, in addition to common sense, must be applied to reduce this risk. The following safety instructions must be strictly observed. Therefore read and comply the safety hints (also see the paragraph *Starting up*) within the user manual prior to turning the flash unit on. Please consult us if you have questions, or if you have any doubts pertaining to the safe operation of this equipment.

Proper use

This compact flash unit is meant for studio use of professional photographers and for industrial applications. Its task is to provide the electric energy for the production of light via flash discharges.

Improper use

This equipment may not be used for any other purposes other than that described above.



Halogen lamps and flashtubes may possibly generate high pressure during operation, and under adverse conditions there is the danger of bursting. Therefore, this flash unit may only be used with a properly installed HENSEL protection glass dome. If that protection dome should show any defects or damages, it must be replaced immediately. It can be ordered from HENSEL or any authorized HENSEL distributor.

- Your Speed Max flash unit comes equipped with a clear glass protection dome. It must be fitted at all times during operation for the protection of persons and objects.

- The changing of the flashtube and modeling lamp must only be executed with the flash unit turned off, unplugged from the mains, and completely discharged.

- The quartz (silica glass) flash tube of the Speed Max is specifically matched to the operating conditions and requirements of this flash unit. Although flash tubes of other flash units may physically fit, only the specific Speed Max flash tubes may be used on that unit. The use of flash tubes other than the originals may result in ruining the flash tube and damaging the flash unit, hurting persons, not mentioning the inevitable loss of warranty, besides.

- The Speed Max must only be used on supply lines (mains) that have an intact protective ground conductor (earth line).

- Do not route cables across the studio floor if possible to prevent damaging them. They also constitute a source of danger because persons may stumble over them. If routing across the studio floor is the only feasible way, it must be ensured that persons, vehicles, etc. do not run over them. Damaged cables must be replaced immediately.

- The ventilation slots of the Speed Max must be kept unobstructed and there must be a sufficient air supply during operation. Do not stick any objects into ventilation slots or synch sockets. The flash unit must not be used as a place of deposit for tools, drinks or other objects.

- This Speed Max flash unit must not be used in environments that constitute an explosion hazard. Flammable materials, like furnishing fabrics, paper, etc. must not be stored in the immediate vicinity of the flash unit in order to prevent fire hazards. Please observe the required safety spacing of 0.5 m minimum.

- The Speed Max must be protected against humidity, spray water and rain.
  When operating the unit close to water e.g. a swimming pool, it is very important to prevent the unit from falling into the pool because that would create an <u>extremely dangerous situation in which the life of all persons in the pool is at stake!</u> This must be observed unconditionally when working close to water!

- Do not use any third party accessories on this unit, even if they look the same or a vendor is claiming compatibility. Only by using the original parts and accessories it is ensured that the flash unit is fulfilling its dedicated task in a safe and reliable way.

- The flash unit must be doubly secured by means of an additional steel safety cable if it is to be used on a ceiling system, hanging from a pantograph or other fixture.

- Do not point the flash unit directly into the eyes of persons at distances less than 2 m, and do not look straight into the flash reflector, because this can lead to eye damage if a flash should be triggered inadvertently.
  Consequently, the flash unit must be turned off before exchanging light formers. If the protection dome and the surrounding areas should be very hot, the flash unit should be given a chance to cool down to a safe temperature.

- The working area must be properly ventilated and aired regularly to prevent inadmissible ozone concentrations that can occur when using high-powered flash systems.

- The flash unit must be protected against dust at all times. If there is dust emission prevalent in the working area, the flash units not in operation should be protected by a suitable cover. However, this cover must be taken off before putting the unit in operation.

4 Technical Data*

Model	SPEED MAX
Rated Flash Power:	400 J
Guide Number 100 ISO, t 1/60, distance 1m, 12" Refl.:	f 64,2
Flash Duration (t 0.5) in sec. at 3 J Flash Power:	1/57.470 s
Flash Duration (t 0.5) in Sec. at 400 J Flash Power:	Standard-Flash Tube: 1/2000 Special-Flash Tube: 1/1200
Flash Tube:	High Performance Quartz (silica glass) flash tube
Maximum Flash Frequency:	32 Hz
Recycle Time at 100% Power:	0,8 s
Flash Power Adjustments	- In 0.10 steps from 3 J to 400 J . The Power Selection will determine flash duration. - Frequency Priority Mode - Flash Power Priority Mode
Modeling Light:	300 W Halogen max.
Modeling Light Settings	- FULL: Full Brightness - PROP: The Brightness will be dimmed proportionally to the selected flash power. - FC: Flash Check on/off
Special Features:	- Fan cooling, Audio - RS485 Interface, USB, - TTL-(transistor -transistor-logic) Control, - RC Radio Remote, 3 Standard Channels, 3 Special Channels for Freemask-System
Fuses:	2 AF (230 V/ 50 Hz) oder 4AF (115 V/60) DIN 41576-1, High Interrupt Rating
Mains Supply Voltage:	Multi Voltage 110-230 V for worldwide usage
Weight (kg):	6,2
Dimensions in cm without mounting bracket	57,5x 22 x 19,6
Order code:	Nr. 3050 Speed Max

* Technical data may be subject to change without prior notice. All listed values were attained at 230V/50Hz.

5 Control Panel Description

1 Release lever for reflector quick-change assembly

2 Display Flash Frequency (FLASH/s, 2 digits, red)

3 Display Flash Power (ENERGY, 2 digits, red)

4 Multifunctional control for Flash Energy and Frequency selection, RC Radio Control Channel Selector, with integrated pushbutton switch for selection of Frequency and Power Priority Mode.

5 Photo Sensor (Slave Cell)

6 Display (2 digits, green) for ID-Number and selected CH Radio Channel.

7 ID: Pushbutton switch for selecting an ID-Number for RS485 Interface.

8 RC/CH: Pushbutton switch for (RC) radio control ON/ OFF, and (CH) radio channel selection. Separate Indicator-LED.

9 FULL: Pushbutton switch with separate indicator-LED to use the modeling light at maximum brightness.

10 PROP: Pushbutton switch for the modeling light. When activated, the brightness will be proportional to the flash power setting.

11 AUDIO: Pushbutton switch for turning the acoustical ready indicator ON/OFF

12 SLAVE: Pushbutton for switching the photo sensor (slave cell) ON/OFF

13 FC: Flash Check ON/OFF

14 TEST: Pushbutton for manually triggering flashes

15 Flash Ready indicator with big green LED.

16 ON/OFF: Mains supply switch

17 Mains supply socket with integrated fuse holder

18 Fuse 20mm 2 AF (230V/50Hz) or 4 AF (115V/60Hz)

19 Spare Fuse

20 USB: socket for programming with a computer.

21 TTL: socket for triggering flashes by means of a TTL-signal (transistor-transistor-logic, +5V)

22 RS485: socket of the RS485 interface

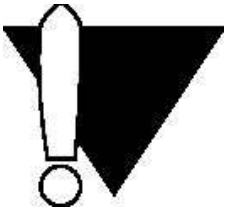
23 SYNC: jack for sync cable with 6.3 mm plug

24 Umbrella holder with quick clamping mechanism

6 Starting up

Safety hints for using the Speed Max

To avoid damaging the flash tube, mount reflectors and light formers (soft boxes, etc.) to the unit before putting it into operation. Avoid moving the Speed Max around when it is turned on. The flash unit should be shut off for each change of reflectors or when moving it to another location.
Caution: Reflectors, speed rings, protection glass domes and other accessories will heat up during longer operation. To avoid injuries, handle these parts with thermally protecting cloth, or wait until parts have sufficiently cooled down.



A damaged and possibly broken flash tube constitutes an extreme hazard if the electrodes become exposed. The power capacitors of the flash unit are charged to a very high voltage level, and should a person come in contact with parts carrying such a potentially lethal voltage, a current may flow through that person's body at a magnitude that causes cardiac arrest.

In case of a damaged flashtube, the unit must be disconnected from the mains immediately. Please consider that even though the flash unit is taken off the mains supply, the power capacitors will still retain their charge for some time. For replacement of flash tubes please consult your local HENSEL agency or the HENSEL service department.

Installation and Mounting

If you intend to use your Speed Max in a ceiling system, pantograph, or other structure, it is required to doubly secure the flash unit in order to prevent it from falling down. Safety regulations dictate that a steel safety cable is to be run from the bracket of the flash unit to the safety ring on the suspending fixture, or alternatively looped through suitable components. Mounting the flash unit by merely tightening the retaining screw on the U-bracket will not be sufficient.

An appropriate safety cable is available through HENSEL-VISIT suppliers (Code No. 769). Please observe that a pantograph or the hanging fixture itself must be secured by means of a steel safety cable.

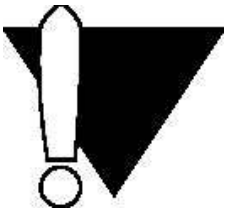
Heat development

All flash units emit heat when modeling light and flash tube are in use. This heat development can possibly heat equipment parts up, so that there is a danger of injury when touching these parts. Due to the development of heat, flash units must not be operated in the vicinity of easily flammable material.

An appropriate safety distance must be kept. Furthermore, the flash unit's air vents must be kept unobstructed to insure sufficient ventilation at all times. The units should not be left unattended during operation.
The modeling light must not be used continuously at full power, otherwise the flash unit may overheat.

An appropriate cool down period must be allowed for. The modeling light should not be used as a substitute for studio lighting. It merely serves as an aid when focussing and to estimate the light/shadow distribution better. Please note the safety stickers pertaining to this located on the device.

Acclimatizing



When moving the flash unit from one location to another with different climatic condition, the unit should be allowed to spend some time in the new location or environment before it is put into operation. This reduces the risk of adverse behavior or even damages caused by deposits of moisture on electrical components due to condensation.

Mounting the Speed Max

Speed Max flash units come equipped with a U-bracket. They can be operated on a light stand or they can be hanging from pantographs or other fixtures. The traditional HENSEL U-bracket can be swung through and allows simple locking into the desired position. Furthermore, the bracket is sporting an integrated fluid disc for smooth movement without jerking.

Installing the protection glass dome

Attention: Handling or installing the protective glass cover must only be executed when the flash unit is turned off and separated from the mains supply. Allow the flash unit and its glass cover to cool down before handling it. Care must be taken to avoid damaging the flash tube or the halogen modeling lamp.
The glass dome is held by three springs. It has to be tilted slightly while moving it into position over two of the three springs. Next, applying moderate pressure, the glass dome has to be pushed into position until the third spring snaps in.

To remove the glass dome it is necessary to tilt it slightly until one of the springs comes free. Exerting only moderate force the glass dome can now be pulled from the remaining springs in a straight forward direction.

Attaching accessories

All HENSEL reflectors and HENSEL soft boxes with the EH series (Ø 10 cm mount) may be attached to the Speed Max flash unit, including umbrellas and Softstars.

The quick-change reflector mechanism of the Speed Max makes changing light formers easy. In order to connect reflectors or soft boxes, the holding clamps must be unlocked and brought into the open position by moving
1 lever **1** to the left into the end position. Now the light former can be moved carefully into place, aligning it so it sits square and even. Moving the lever **1** to the right will lock the light former firmly into position.

For the removal of a light former it must be held firmly (*Careful - it may be hot !)* before the clamps of the quick-change mechanism are brought into the unlock position by moving lever **1** to the left. This releases the light former so it can be taken off carefully.

The Speed Max comes equipped with an integrated
24 umbrella holder **24.** Its spring clamping mechanism enables mounting of umbrellas and Softstars.

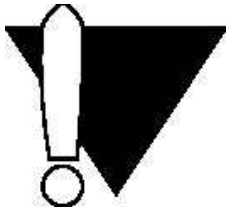
Mains connection

***Attention**:*

*Your Speed Max is equipped with Multi Voltage Technology that allows the operation of the unit worldwide with mains supplies from 110 to 230 V/ 50 or 60Hz. However, it must be ensured that the electric rating of the modeling light fuse found in the fuse holder **18,** integrated into the mains supply socket **17**, and the modeling lamp itself are of the correct type required for safe operation with that particular mains supply voltage.*

18
17

*The provided power cable serves the purpose of connecting the mains socket **17** to the mains supply outlet.*



This flash unit must only be operated when connected to mains outlets with properly installed ground connection.

16

The flash unit is turned ON/OFF with the mains switch **16**.

Attention: After turning the flash unit off there are still dangerous voltages present within the unit and at the electrodes of the flash tube for some time.

Fuses

Outlets, building circuits

An outlet in a circuit with a **16 A** fuse is required for the safe operation of the Speed Max flash unit.

Fuses for the flash unit

18
230V/50Hz

The task for fuse **18** is to protect the modeling lamp circuit.
The Speed Max requires a 2A-fuse with a blow time rating "fast" (2 AF) for operation on a 230V/50 Hz mains line if a 300W/230V halogen modeling lamp is being used.

18
115V/60Hz

For operation on a 115/60 Hz mains line a 4AF-fuse is required to protect a 300W/115V halogen modeling lamp.

For more information please turn to page 24 "Replacement of fuses".

The electronic circuits and flash power capacitors are protected by internal safety measures that are not accessible from the outside. Should these react to a fault condition the flash unit will switch off. Only an authorized HENSEL service station is able to first analyze and eliminate the fault.

Overheat Prevention
Large series of subsequent flashes under unfavorable working conditions may cause overheating of the flash unit, bringing the thermal protection devices into reaction that put the unit in idle state. It will resume operation again as soon as it has cooled down sufficiently. Do not turn the mains power off during the cooling process.

7 Operating Instructions

Synchronization (Flash triggering)

Synchronization by cable

23: SYNC

The sync jack **23** can be used to connect a synchronization cable with 6,3 mm phone plug to the flash unit. The synchronization circuit is made up of state-of-the-art semi-conductor technology and enables dependable triggering of the flash even with older cameras with mechanical contacts.
The very low voltage at the sync jack ensures safe and reliable triggering by digital cameras too. However, due to the many different electronic circuits for controlling synchronization found in cameras, we cannot take any liability for unreliable operation, or potential damages to cameras connected to our flash unit. Please contact the camera manufacturer before using an unusual or non-standard camera.

Synchronization by slave

5, 12: SLAVE

The Speed Max can also be triggered via its built-in slave cell (photo cell) **5**, reacting to the light pulse sent by another flash unit. This mode of operation is activated by pushbutton switch **12.** The ON-state is signalled when the small yellow LED located above the switch lights-up.

The photo cell reacts to a pulse of light. It can only work reliably when the triggering flash is definitely stronger than the ambient light. If this is not the case, please switch the photo cell off, and use the sync cable or a radio remote sender instead.

Synchronization via radio flash trigger system

8:
RC/CH

The Speed Max is equipped with an integrated radio control receiver compatible to the HENSEL Strobe Wizard System. Radio control mode (RC) is activated / deactivated by pushing switch **8**. Radio triggering also works around corners and is immune to ambient light. The working range is up to 40 m under line-of-sight conditions.

The radio transmitter is available as an accessory from HENSEL distributors. It is able to trigger flashes, and can also be used to control the flash power settings and the modeling light. It is simply connected to the camera using the provided synchronization cable or by mounting the transmitter to the Hot Shoe of the camera directly. Using the lateral sliding switch, three different working channels or an 'All' option can be selected. The Speed Max flash units are compatible to the FREEMASK system!

More information about the radio control system is available on page 21-23.

Manually triggering flashes

14:
TEST

Flashes can be triggered manually by pressing pushbutton **14**.
Flashes will be triggered continuously as long as the pushbutton is being pressed.
The flash repetition frequency is depending on the flash power setting!

Flash power control

General:
The effective flash power output of the Speed Max is controlled by the flash duration. This means that the flash duration will be longer when the flash power setting is increased. A longer flash duration will discharge the power storage capacitors to a greater degree.

Consequently, at the lower power settings the number of possible repetitive flashes increases, because the flash duration is shorter and the power capacitors are discharged to a lesser degree for each flash.
An adjustment to reduce the flash power setting on the Speed Max does not require any dump action. The selected power is immediately available.

4:

Pushing the multi functional control knob **4** will activate either Frequency- or the Flash Power Priority Mode.

Frequency Priority Mode:

2:

If this mode is activated the display **2** FLASH/s will exhibit a blinking dot on the lower right. In the frequency priority mode the flash unit will definitely maintain the selected flash repetition rate (function of multifunctional control knob, sync jack, TTL-input jack, radio remote or slave) up to the maximum frequency (32 Hz). The display will show "HI" at frequencies higher than that. If the power capacitors are being drained to a state in which the selected flash energy output cannot be maintained anymore, the flash unit will give absolute priority to the selected repetition rate, however, at an effectively lower flash power output. This situation will be signaled by the blinking digits in the ENERGY display. The user is able to continue working, however, the flash output does not correspond anymore to the value shown on the ENERGY display. The flash energy will be reduced automatically.

Flash Power Priority Mode:

3, 4:

If this mode is activated the display **3** ENERGY will exhibit a blinking dot on the lower right. In the flash power priority mode the flash unit will definitely maintain the selected flash power output. This means that after each flash the charging process of the capacitors sets in until they are fully charged. It is not possible to trigger a flash before the required voltage is reached. If the user tries to trigger flashes at a rate faster than the charging time allows, the trigger attempts in this not-ready-state will be simply ignored. This assures that each flash discharge corresponds to the selected flash power setting.

By turning the control knob **4** the desired flash power can be set in 1/10 f-stop increments over a range of 3.0 to 10.0. The selected setting is shown on the 2-digit display **3** ENERGY.

Flash Readiness

Flash readiness of the compact flash is signaled by:

15

- the large green READY indicator LED **15** turning on
- the modeling light turning on again when operating in the activated Flash Check mode (pushbutton switch 1**3,** FC)

13:
FC

11:
AUDIO

- an acoustical signal, provided the AUDIO mode is activated (pushbutton **11)**

Modeling light

The modeling light will be at maximum brightness when the FULL option is activated by pushing switch **9** and the indicator LED turns on.

9:
FULL

10:
PROP

By activating the PROP mode via pushbutton switch **10** the intensity of the modeling light will be proportional to the flash power setting.

OFF

There is no separate switch for turning the modeling light on or off. The modeling light will be OFF when both FULL and PROP modes are deactivated at the same time, meaning that both LED indicators, located above push button switches **9** and **10,** are not alight. Pushing either switch will turn the modeling light back on.

AUDIO (Acoustical Signal Function)

11:
AUDIO

Push button switch **11** will activate the acoustical signal mode for flash readiness. A short beep tone will signal that the flash unit is ready to be triggered again.

AUDIO (Flash Discharge Counter Function)

11:
Special function

Pushing and holding button AUDIO for approx. 3 seconds will show the number of flash discharges since last re-set in displays FLASH/s and ENERGY. Flash count starts at "0000", and after "9999" the count will continue starting over again at "0000".

By pushing control knob **4** the counter is re-set to zero ("0000"). The flash counter mode can be deactivated by pushing the AUDIO button; otherwise it will do that automatically after 5 seconds with the displays returning to normal operation.

Flash Check

13: FC

Activating this option via pushbutton **13** will make the modeling lamp go off after each flash discharge. This is to signal that the flash unit has fired. The lamp will come back on when the ready state is attained. The flash check assures that all units in a given setup were reliably triggered.

Allocation of Identification Number for Interface RS485

6, 7: ID

A dedicated identification number can be allocated to each Speed Max via pushbutton **7**. This ID number is shown in the small green 2-digit display **6** above the pushbutton switch.

Each time button **7** is pushed the ID number will be raised by one. Numbering starts at 00. After number 09 the number 00 will show again. By allocating a dedicated ID number to each flash unit it will be possible to selectively access that unit by means of the RS485 interface.

USB Socket

20: USB

The USB socket **20** of the Speed Max can be connected to a USB port of a computer for transferring firmware or for programming purposes. To start the boot loader mode the Speed Max must be first powered off, then all three buttons PROP, AUDIO and SLAVE must be pushed and held at the same time, and while doing that the unit must be turned on. If the flash unit is getting connected to the computer for the first time the computer screen will display "new hardware was found" and the necessary drivers will be installed automatically. While in the programming mode LEDs and displays on the Speed Max go dark, all except the big green READY LED which will flash intermittently.

TTL Input

21:
TTL

The TTL-input jack **21** can be used to connect the Speed Max to a signal generator for triggering flash discharges. The "TTL" designation stands here for "transistor-transistor-logic" and describes standardized properties of signals used in logic circuits. This signal "TTL" should not be mistaken for the term "through the lens" found in photographic applications.
The TTL signal must have 0 volts for a "LOW" logic state. The signal going "HIGH" (+5V) will trigger a flash discharge. The pulse width of the signal can be used to control the flash duration. However, the effective flash duration can never be made longer than the nominal flash duration of the flash tube (depending on the flash tube used, the pulse width is typically 20µs to 500µs). For example: If a flash discharge of 200µs duration needs to be generated, a signal pulse with a "High" state (+5V) and 200 µs duration must be applied to the TTL jack.

RS485 Interface

22:
RS485

The flash unit can be remotely controlled by using the interface RS 485. The interface can be programmed and configured according to specifications and requirement of the customer via USB connection **22**. Please consult the HENSEL team for specific information.

Error Messages

ERROR MESSAGES

NO FLASH
In case a trigger attempt fails the Speed Max will register it as a "NO FLASH" error. The small yellow display **6** will show the word "NO", the large red display **2** (FLASH/s) "FL", and the large red display **3** (ENERGY) "AS". The letter "H" cannot be shown because of the limitation of the display to 6 digits. Possible causes for the error messages: flash tube or equipment failure.

NO LOAD
If a problem during the charging process arises and the power capacitors fail to reach their working voltage level within 5 seconds, the charging attempt will be aborted. This error will be displayed as "NO LOAD".

Please turn the flash unit off if an error message appears. Wait 5 minutes, and then turn the unit back on. Should the error message still appear, send the unit to HENSEL customer service or an authorized HENSEL service station.

Radio Remote Control System FREEMASK

Utilization

The Speed Max flash unit comes equipped with an integrated, FREEMASK-capable radio control receiver compatible to the HENSEL Strobe Wizard System. It is able to receive the radio signals from the optional radio control transmitter used to trigger flashes, to control the flash power settings, and to set the modeling light into FULL/PROP/OFF mode. Radio technology works around corners, and it is immune to ambient light. The working range is up to 40 m under line-of-sight conditions.

The radio transmitter is dedicated to the HENSEL Strobe Wizard System and may not be used for any other application, especially not to control other electronic devices or machines.

Using the radio remote control receiver and selecting channels

8: RC/CH

The radio control receiver can be activated and set to the selected working channel of the radio transmitter/sender by pushing button **8** RC/CH. The pushbutton switch **8** serves a dual function:

- Depressing it momentarily will activate the RC-Function. This state is confirmed by the indicator LED located above the button.
- Depressing it for 2 seconds will activate the CH-function (Channel Select) that allows selection of a working channel (C1, C2, C3 und F1, F2, F3) by turning the multifunctional control knob **4**. The individual channel number will be shown in the small green display above the ID button **7** for duration of 5 seconds. If no input takes place within that time the display will automatically switch into standard state.

The last channel displayed will be stored in memory and activated.

The Speed Max flash unit can now be selectively addressed by the transmitter/sender unit. Setting the transmitter to the "ALL" option makes every flash unit in the system respond at the same time, independent from its individual working channel.
Info: channels F1, F2 und F3 are allocated to flash units used for the HENSEL FREEMASK system.

FREEMASK tips:

When using the compact flash units for normal lighting of a set using the standard channels C1, C2, and C3, besides triggering the flash it can also be used to adjust the modeling light, and to select the flash power setting via radio remote control, just like you have been used to until now. The Freemask application, employing a second group of flash units to create the mask exposure, does not allow you to switch the modeling light or to change the flash power setting via radio remote for that group. You can only use channels F1, F2, and F3 to distinguish between up to three different, separate work areas.

Channel selection for a single work area

If using the Freemask application please set the flash units used for the main lighting of the shoot to C-channels in order to trigger these units automatically and synchronized.

The flash units of the Freemask group, used for the mask lighting, have to be set on channels F1, or F2, or F3. The slaves of the Freemask compact flash units must be deactivated to avoid being triggered by the first flash group. The slaves of all other flash units, with the exception of the Speed Max, may be left in the activated state. The Speed Max units are able to reach the ready state so quickly that they may be undesirably triggered by the firing of the second group of flash units used to create the mask exposure.

The Freemask transmitter has be set to channel ALL.

Channel selection for multiple work areas:

If several, separate work stations are to be used at the same time within the range of the radio remote control, the following configurations can be selected in order the prevent interference with each other: matched channels have to be assigned to all flash units of both work groups, as well as to the Freemask transmitter (e.g. C1 + F1 for work area 1, and C2 + F2 for work area 2, and C3 + F3 for work area 3).

Camera settings:

Use the following settings for the Freemask application if your camera supports them:

- Frame rate to fastest setting possible
- Number of frames in a burst to two (2).

This ensures that the interval between the two successive exposures is as small as possible (depending on the camera in use).

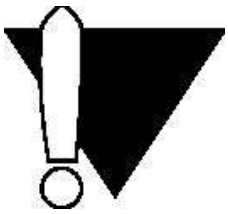
The transmitter will then trigger flash group 1 (C1, C2, and C3) for the main set lighting (exposure 1), and flash group 2 (F1, F2, and F3) for the mask lighting (exposure 2), in order to obtain the two required camera exposures. At present, all cameras are supported that have frame rate capabilities from 3 frames/s to (theoretically) 500 frames/s. The transmitter automatically defaults to frame trigger mode 1 after 200 ms, independent from the actual number of exposures. This ensures that the main set lighting is always relating to the first frame, and the mask lighting for the second frame when using the Freemask application.

8 Maintenance and Care

Regular Inspection

According to national safety regulations, electric equipment requires inspections and maintenance on a regular basis to ensure safe operation. An inspection once a year of your Speed Max by an authorized HENSEL customer service ensures the safety of users, and also helps to protect your investment.

The user himself is limited to a regular external check to detect potential damages, and to keep the flash unit free of dust and dirt.



<u>Caution:</u> The flash unit must never be cleaned or come in contact with moist or wet cleaning media. Using a dry cloth or a vacuum cleaner with brush accessory does a good job in removing dust.
The flash unit must be disconnected from the mains outlet during inspection or cleaning work.

Operation on a 230V/50Hz Mains Line

<u>300W/230V Halogen:</u>
2 AF

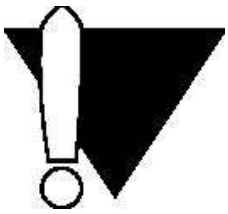
The Speed Max flash unit is normally shipped with a 2A fuse with a blow time rating "fast" (2 AF) for operation on a 230V/50 Hz mains line. This fuse protects the modeling light circuit allowing safe operation with a 300W/230V halogen modeling lamp.

Operation on an 115V/60 Hz Mains Line

<u>300W/115V Halogen:</u>
4AF

For operation on a 115/60 Hz mains line a 4AF fuse is required to protect the modeling lamp circuit using a 300W/115V halogen modeling lamp.

Replacement of fuses



<u>Attention:</u>
It is absolutely forbidden to "repair" fuses by bridging with conductive materials or any other means!
All fuses must meet the specifications of DIN 41576-1 and must be of a type with a high interrupt capability rating.
The electronic circuits and flash power capacitors are protected by internal safety measures that are not accessible from the outside.

Should these react to a fault condition the flash unit will switch off. Only an authorized HENSEL service station is able to first analyze and then eliminate the fault.

If the modeling light fuse has to be replaced make first sure that the flash unit is switched off, and the mains plug is pulled in order to separate the unit from the mains supply.

18

The fuse holder **18** is located next to the mains socket on the back of the unit. The removable insert can be pried up using a small screw driver. The fuse located in the rear of the drawer is the active one, and the one up front, completely recessed in its storage compartment, is the spare one!

Replacement of modeling lamp

Max. 300W Halogen

Replace a modeling lamp only when the unit is switched off and unplugged from the mains outlet. Use halogen modeling lamps ***300W*** **maximum** *(base G 6.35)*. Make sure that the modeling light circuit is protected by a fuse with the correct rating and specifications. In any case, the fuse must always be checked, because it is most likely to blow when the halogen lamp goes out.

Wait until the glass protection dome and the modeling lamp have cooled down sufficiently. Remove the glass dome carefully (specific instructions on previous pages) and pull the expended halogen lamp from its socket and replace it with a new one.

It must be prevented, by all means, to touch the flash tube and halogen lamp directly (danger!)

Handle the halogen lamp carefully because of the high pressure inside. Avoid touching the quartz glass envelope of the halogen lamp with your fingers, because that may result in corrosion due to the skin oils and acids burning-in, increasing the danger of a bursting glass envelope during operation. It is best to use protective cotton gloves or a clean cloth when handling it.

Return to customer service
For maximum protection of the flash unit when shipping we recommend that you keep one of the original packaging for each type.

9 Disposal

The packaging of the flash unit must be separately disposed of and recycled. Worn out and broken electric equipment must be disposed of by electronics recycling.

10 Accessories

There is a wide range of useful accessories available.

Reflectors

Softboxes

Umbrellas

11 Customer service

Works customer service
with 24 hours express service

HENSEL-VISIT International GmbH
GERMANY
- Service department -
Robert-Bunsen-Str. 3
D-97076 Würzburg

Tel.: +49 (0) 931 / 27881-0
Fax: +49 (0) 931 / 27881-50

International service addresses

are available at **www.hensel.de**

Declaration of Conformity

for Radio and Telecommunication Terminal Equipment, Electromagnetic Compatibility and Safety

Manufacturer:	HENSEL Studiotechnik GmbH & Co.KG Robert-Bunsen-Str. 3 97076 Würzburg Germany
Owner of Certification:	HENSEL Studiotechnik GmbH & Co.KG Robert-Bunsen-Str. 3 97076 Würzburg Germany
Test Report:	of November 30, 2010
Product:	**Speedmax**
Description:	**Radio and Telecommunication Terminal Equipment**
Standards:	EN 300220-2 V 2.1.2

This declaration of conformity is made by the above mentioned manufacturer according to article 3, of the governing EU- directives R&TTE1999/5/EC referring to Radio and Telecommunication Terminal Equipment for bringing the statutory instruments of the Member States into lines with each other. This declaration does not make any statement according to requirements of other provisions concerning the electromagnetic compatibility and safety.

Description:	**Emission and Interference Resistance**
Standards:	EN 301489-1 V 1.8.1 EN 301489-3 V 1.4.1

This declaration of conformity is made by the above mentioned manufacturer according to article 10, paragraph 1, of the governing EU- directives 2004/108/EC referring to electromagnetic compatibility and safety for bringing the statutory instruments of the Member States into lines with each other. This declaration does not make any statement according to requirements of other provisions concerning the electromagnetic compatibility and safety.

Description:	**Low Voltage Directive**
Standards:	EN 60065:2002+A1:2006+Cor.:2007+A11:2008 EN 60598-1:2008+A11:2009 EN 60598-2-9:1989+A1:1994 EN 50371:2002

This declaration of conformity is made by the above mentioned manufacturer according to article 10, paragraph 1, of the Governing EU- directives 2006/95/EC referring to electrical items for usage within specified voltage limits.

This declaration of conformity is the result of testing samples of the products submitted, in accordance with the provisions of the relevant specific standards.

Date: November 30, 2010

Manufacturer

E. Stumpf
- Managing Director -
HENSEL Studiotechnik GmbH & Co.KG

HENSEL

performing light

WWW.HENSEL.DE